



Part of a whole
 « Quantification of a relationship between a whole and a designated number of parts »

The fraction $\frac{3}{4}$ can mean 3 parts of a unit that will be divided into 4. We can say three quarters of a cake, of a collection of objects, of a distance . . .

The whole is the reference point.

Ratio
 « Relationship between two quantities »

The fraction $\frac{3}{4}$ can mean a ratio of 3 to 4.
 We can say: Every time we count 4, we colour in 3.
 Or: For every 3 black marbles, there are 4 white ones.
 ●●●○○○ ●●●○○○
 ●●●○○○○○ ●●●○○○○○
 The whole is not always the reference point.

Meanings covered in elementary school

Meanings of a fraction

Quotient
 « a/b notation represents the result of dividing a by b »

Result of a division:

- There are 4 cookies for 3 children $4 \div 3$. Each child will have $\frac{4}{3}$ of a cookie.
- There are 3 cookies for 4 children $3 \div 4$. Each child will have $\frac{3}{4}$ of a cookie.

Operator
 « Application of a fraction a/b to an initial quantity to obtain a larger or smaller quantity (increase or reduction) »

To construct a geometric figure $\frac{4}{3}$ times larger than a given figure, we must multiply each dimension of the figure by the fraction $\frac{4}{3}$.
 (dilatation with a scale factor of $\frac{4}{3}$)

Measure
 « Repetition of a unit fraction »

When making chocolate milk for one person, Julie pours $\frac{1}{4}$ of a cup of chocolate powder into her glass. She wants to make this recipe for 3 people. She will then have to pour 3 times $\frac{1}{4}$ of a cup of chocolate powder into a container or prepare 3 glasses, each containing $\frac{1}{4}$ of a cup of chocolate powder.
 $\frac{3}{4} = 3 \times \frac{1}{4} = \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$

Meanings covered in secondary school

Note: Factors such as the context, the question asked and the type of data involved will determine whether some meanings will be used more than others. However, different meanings of fractions may have to be considered in the same problem.